

## **CLAIMS**

What is claimed is:

1. A method for automatically collecting trace detail data of a program activity in a computer system, comprising:
  - tracing the program activity at a first level to produce the trace detail data;
  - writing the trace detail data to a trace buffer;
  - if the first level exceeds a first predetermined value continuing to trace the program activity at the first level, otherwise writing the trace buffer to a log;
  - if the first level is equal to a second predetermined value, writing the trace buffer to the log; and
  - if the first level does not exceed a third predetermined value, continuing to trace at the first level, otherwise writing the trace buffer to the log.
2. The method of claim 1, wherein writing the trace buffer to the log further comprises clearing the trace buffer.
3. The method of claim 2, wherein the trace buffer is a circular buffer that comprises a configurable number of trace records containing the trace detail data.
4. The method of claim 3, wherein the first predetermined value is a log level value.
5. The method of claim 4, wherein the second predetermined value is a trap value.

6. The method of claim 5, wherein the third predetermined value is a history trace level.

7. The method of claim 6, wherein the first value, the second value, and the third predetermined value are selectable.

8. The method of claim 7, wherein the log and the trace buffer reside on different computer systems that communicate over a network.

9. A system for automatically collecting trace detail data of a program activity in a computer system, comprising:

- means for tracing the program activity at a first level to produce the trace detail data;

- means for writing the trace detail data to a trace buffer;

- means for continuing to trace the program activity at the first level if the first level exceeds a first predetermined value

- means for writing the trace buffer to a log if the first level does not exceed the first predetermined value;

- means for writing the trace buffer to the log if the first level is equal to a second predetermined value;

- means for continuing to trace at the first level if the first level does not exceed a third predetermined value; and

- means for writing the trace buffer to the log if the first level exceeds the third predetermined value.

10. The system of claim 9, wherein the means for writing the trace buffer to the log comprises means for clearing the trace buffer.

11. The system of claim 9, wherein the means for writing the trace buffer to the log comprises means for clearing the trace buffer.

12. The system of claim 11, wherein the trace buffer is a circular buffer that comprises a configurable number of trace records containing the trace detail data.

13. The system of claim 12, wherein the first predetermined value is a log level value.

14. The system of claim 13, wherein the second predetermined value is a trap value.

15. The system of claim 14, wherein the third predetermined value is a history trace level.

16. The system of claim 15, wherein the first value, the second value, and the third predetermined value are selectable.

17. The system of claim 16, wherein the log and the trace buffer reside on different computer systems that communicate over a network.

18. A computer program product having instruction codes that are embedded on a medium, for automatically collecting trace detail data of a program activity in a computer system, comprising:

a first set of instruction codes for tracing the program activity at a first level to produce the trace detail data;

a second set of instruction codes for writing the trace detail data to a trace buffer;

a third set of instruction codes for continuing to trace the program activity at the first level if the first level exceeds a first predetermined value

wherein the third set of instruction codes writes the trace buffer to a log if the first level does not exceed the first predetermined value;

a fourth set of instruction codes for writing the trace buffer to the log if the first level is equal to a second predetermined value;

wherein the fourth set of instruction codes continues to trace at the first level if the first level does not exceed a third predetermined value; and

a fifth set of instruction codes for writing the trace buffer to the log if the first level exceeds the third predetermined value.

19. The computer program product of claim 18, wherein the second set of instruction codes comprises a sixth set of instruction codes for clearing the trace buffer.

20. The computer program product of claim 19, wherein the trace buffer is a circular buffer that comprises a configurable number of trace records containing the trace detail data.

21. The computer program product of claim 20, wherein the first predetermined value is a log level value.

22. The computer program product of claim 21, wherein the second predetermined value is a trap value.

23. The computer program product of claim 23, wherein the third predetermined value is a history trace level.

24. The computer program product of claim 23, wherein the first value, the second value, and the third predetermined value are selectable.

25. The computer program product of claim 24, wherein the log and the trace buffer reside on different computer systems that communicate over a network.